

Revision Date 19-Jun-2015

Version 2

1. IDENTIFICATION

Product Name Phenol, 88-90%, Liquefied

Product Code 6464

CAS No. 108-95-2

Chemical Formula C₆H₅OH

Recommended Use For laboratory, scientific, R&D or manufacturing use.

Company E K Industries, Inc.
1403 Herkimer St.
Joliet, IL 60432
Tel. (800) 283-4244

Emergency Telephone Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|---------------------------|
| Acute toxicity - Oral | Category 3 |
| Acute toxicity - Dermal | Category 3 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 3 |
| Skin corrosion/irritation | Category 1 Sub-category B |
| Serious eye damage/eye irritation | Category 1 |
| Germ cell mutagenicity | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 2 |

Label elements

Signal word

Danger

Hazard statements

Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes severe skin burns and eye damage. Suspected of causing genetic defects. May cause damage to organs through prolonged or repeated exposure.



Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% |
|---------------|----------|----------|
| Phenol | 108-95-2 | 88 - 90 |

4. FIRST AID MEASURES**Description of first aid measures**

| | |
|-----------------------|---|
| General advice | Immediately call a POISON CENTER or doctor/physician. |
| Eye contact | Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention. |
| Skin contact | Wash thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. |
| Ingestion | Do NOT induce vomiting unless instructed to do so by medical personnel. If conscious, rinse mouth and give several glasses of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical attention. |

Most important symptoms and effects, both acute and delayed

| | |
|---------------------------|---------------------------|
| Symptoms | No information available. |
| Note to physicians | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Water spray (fog) Alcohol resistant foam Dry chemical Carbon dioxide (CO₂)

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Carbon oxides.

Protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

NFPA

Health hazards 4

Flammability 2

Instability 0

Physical and Chemical
Properties -**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

| | |
|----------------------------------|---|
| Personal precautions | Use personal protective equipment as required. Avoid creating dust. Ensure adequate ventilation, especially in confined areas. Avoid breathing vapors or mists. |
| For emergency responders | Wear respiratory protection. |
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. |

Methods and material for containment and cleaning up

| | |
|--------------------------------|--|
| Methods for containment | Prevent dust cloud. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. |
| Methods for cleaning up | Absorb spill with inert material, scoop up and containerize for disposal. After cleaning, flush away traces with water. |

7. HANDLING AND STORAGE

| | |
|--------------------------------|---|
| Advice on safe handling | Avoid contact with skin, eyes or clothing. Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation, especially in confined areas. |
| Storage Conditions | Keep containers tightly closed in a dry, cool and well-ventilated place. |
| Incompatible materials | Formaldehyde. Calcium Hypochlorite. Sodium Nitrite. Oxidizing mineral acids. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational exposure limits**

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------|--------------------|--|--|
| Phenol 108-95-2 | TWA: 5 ppm Skin | TWA: 5 ppm TWA: 19 mg/m ³ (vacated) TWA: 5 ppm (vacated) TWA: 19 mg/m ³ (vacated) Skin Skin | IDLH: 250 ppm Ceiling: 15.6 ppm 15 min Ceiling: 60 mg/m ³ 15 min TWA: 5 ppm TWA: 19 mg/m ³ |

Appropriate engineering controls

| | |
|-----------------------------|---|
| Engineering Controls | Emergency showers, eyewash stations, ventilation systems. |
|-----------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. |
| Respiratory protection | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved |

respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|--------------------------------|--------------------------|
| Physical state | Liquid |
| Appearance | Colorless to brownish |
| Odor | Characteristic sweet |
| Odor threshold | No information available |
| pH | No information available |
| Melting point / freezing point | No information available |
| Boiling point / boiling range | 182 C |
| Flash point | 79 C |
| Evaporation rate | <0.01 |
| Flammability (solid, gas) | No information available |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | 0.4 |
| Vapor density | 3.2 |
| Relative density | 1.06 |
| Water solubility | slightly soluble |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Stability | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions | None under normal processing. |
| Conditions to avoid | Extremes of temperature and direct sunlight |
| Incompatible materials | Formaldehyde. Calcium Hypochlorite. Sodium Nitrite. Oxidizing mineral acids. |
| Hazardous Decomposition Products | Carbon oxides. Carbon dioxide (CO ₂). |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|---------------------|---|
| Inhalation | Toxic by inhalation. |
| Eye contact | Risk of serious damage to eyes. |
| Skin contact | Toxic in contact with skin. Contact causes severe skin irritation and possible burns. |
| Ingestion | Toxic if swallowed. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|-----------|-------------|-----------------|
|---------------|-----------|-------------|-----------------|

| | | | |
|--------------------|---|------------------------|---|
| Phenol 108-95-2 | - | = 630 mg/kg (Rabbit) | - |
|--------------------|---|------------------------|---|

Information on toxicological effects**Symptoms**

Vapors may cause drowsiness and dizziness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Causes burns.

Serious eye damage/eye irritation

Risk of serious damage to eyes.

Sensitization

No information available.

Germ cell mutagenicity

Mutagenic.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|--------------------|-------|---------|-----|------|
| Phenol 108-95-2 | - | Group 3 | - | - |

*IARC (International Agency for Research on Cancer)**Group 3 - Not classifiable as to carcinogenicity in humans***STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

Target Organ Effects

Liver, Kidney.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|--------------------|---|---|--|
| Phenol 108-95-2 | 46.42: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.0188 - 0.1044: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 187 - 279: 72 h Desmodesmus subspicatus mg/L EC50 static | 11.9 - 50.5: 96 h Pimephales promelas mg/L LC50 flow-through 20.5 - 25.6: 96 h Pimephales promelas mg/L LC50 static 32: 96 h Pimephales promelas mg/L LC50 5.449 - 6.789: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.5 - 14: 96 h Oncorhynchus mykiss mg/L LC50 static 4.23 - 7.49: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.0 - 12.0: 96 h Oncorhynchus mykiss mg/L LC50 13.5: 96 h Lepomis macrochirus mg/L LC50 static 11.9 - 25.3: 96 h Lepomis macrochirus mg/L LC50 flow-through 11.5: 96 h Lepomis macrochirus mg/L LC50 semi-static 34.09 - 47.64: 96 h Poecilia reticulata mg/L LC50 static 31: 96 h Poecilia reticulata mg/L LC50 semi-static 27.8: 96 h Brachydanio rerio mg/L LC50 0.00175: 96 h Cyprinus carpio mg/L LC50 semi-static 33.9 - 43.3: 96 h Oryzias latipes mg/L LC50 flow-through 23.4 - 36.6: 96 h Oryzias latipes mg/L LC50 static | 4.24 - 10.7: 48 h Daphnia magna mg/L EC50 Static 10.2 - 15.5: 48 h Daphnia magna mg/L EC50 |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

| Chemical Name | Partition coefficient |
|--------------------|-----------------------|
| Phenol 108-95-2 | 1.47 |

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--------------------|------|---|------------------------|------------------------|
| Phenol 108-95-2 | U188 | Included in waste streams: F039, K001, K022, K087 Included in waste stream: K060 | - | U188 |

| Chemical Name | California Hazardous Waste Status |
|--------------------|-----------------------------------|
| Phenol 108-95-2 | Toxic Corrosive |

14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR 173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

DOT

UN/ID no. 2821
 Proper shipping name Phenol solutions
 Hazard Class 6.1
 Packing Group II

IATA

UN/ID no. 2821
 Proper shipping name Phenol solutions
 Hazard Class 6.1
 Packing Group II

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | SARA 313 - Threshold Values % |
|-------------------|-------------------------------|
| Phenol - 108-95-2 | 1.0 |

SARA 311/312 Hazard Categories

Acute health hazard No
 Chronic Health Hazard No
 Fire hazard No
 Sudden release of pressure hazard No
 Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Phenol 108-95-2 | 1000 lb | X | X | X |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|--------------------|--------------------------|----------------|---|
| Phenol 108-95-2 | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--------------------|------------|---------------|--------------|
| Phenol 108-95-2 | X | X | X |

16. OTHER INFORMATION**Prepared By**

EKI Regulatory Affairs (Email: reg@eki-chem.com)

Revision Date

19-Jun-2015

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End of Safety Data Sheet